

Biology Test Review

Key Terms:

Cell	organelle	chromosome	DNA
gene	cloning	mutation	mutagen
mitosis	prophase	metaphase	anaphase
telophase	cytokinesis	interphase	cell cycle
cancer	tissue	organ	meristematic cell
gall	root	shoot	stem cell

Apart from the terms above you should know the following from Chapters 1, 2 and 3

1.1- Cell Structure

- Know all of the parts of the cell that we discussed and what they do.
- Know the Cell Theory
- Know the difference between plant and animal cells

1.2- Nucleus

- Know all the parts of nucleus including chromosomes, DNA, genes,
- Know about mutations and mutagens
- Know about cloning and how it is done

1.3- Mitosis

- Know all the phases of mitosis (Interphase, PMAT, interphase)
- Know the difference between plant and animals cells during cytokinesis

1.4 Cell Cycle

- Know the various checkpoints of the stages of a cell as well as cell death
- Know how tumour and cancer cells behave

2.1 Plant cells, tissues and organs

- Know the types of tissue found in a plant
- Know how a leaf converts energy from the sun into sugars and oxygen
- Know everything about Xylem and Phloem.

2.2- Plant Organ Systems

- Know how the various organs work together to make a fully functioning plant.

3.1-

- Know about stem cells and how they work
- Know about the different types of tissues and the process of cell differentiation

Class presentations-

- From this section, make sure you know what the main purpose of the Excretory, Digestive, Respiratory and Circulatory systems are and how they work.

Recommended Questions

Pg 128- 130 # 1-3, 5, 6, 9-12, 17, 20, 23, 26- 30, 32

Chemistry Unit Review

From Chapter 4.1

- What is an ion, cation, and anion?
- How is an ionic compound created (charges)?
- What are the rules for naming an ionic compound?
- What are the rules for finding a formula for an ionic compound?
- Know how to identify polyatomic ions.

From Chapter 4.2

- Know how a covalent compound is created (sharing of electrons)
- what are the rules for naming a covalent compound?
- What are the rules for finding a formula for a covalent compound?
- know how to identify the differences between ionic and covalent compounds

From Chapter 4.3

- Know what a word equation is
- know what a skeleton equation is
- know what a balanced equation is. Know how to balance an equation.

From Chapter 5.1

- What is a synthesis reaction? If given reactants can you create the products?
- what is a decomposition reaction? If given the reactants can you create the products?

From Chapter 5.2

- What is a single displacement reaction?

- Know how to use the activity series to know if a single displacement reaction occurs
- What is a double displacement reaction?

From Chapter 6.1

- Know what makes something an acid.
- Know the rules for naming binary acids
- know the rules for naming oxoacids
- know the difference between binary acids and oxoacids
- know what makes something a base
- know the rules for naming bases

From Chapter 6.2

- Know the pH scale and when something is an acid or a base or neutral
- know how increases in pH are related to the concentration in H^+ ions.
- know how to understand a table involving indicators to narrow down the pH

From Chapter 6.3

- Know how neutralization works.
- Understand the process of liming

Recommended Questions

Pg 252 # 1-9

pg 258 # 2-7,

pg 259 # 11, 12, 15, 16, 18

Climate Change Unit Review

Key Terms:

atmosphere	climate	greenhouse effect	albedo
anthropogenic	eccentricity	tilt	wobble
tectonic plates	Climatograph	biome	ecozone
Koppen climate classification system	ecoregion		global warming
desertification	deforestation	Feedback Loop	Radiation
Conduction	Convection	Sinks	Greenhouse gas

Thermohaline Circulation		biogeochemical cycle	
Paleoclimatologist	Ice Core	Isotope	Sedimentary Rock
Fossils	Geostationary Satellites		Climate Model
General Circulation Model		Carbon Footprint	Bias

Apart from the key terms above, you should know the following from chapter 7

From Chapter 7.1

- Know the difference between climate and weather
- Know how the sun is responsible for climate change
- Know how the earth is responsible for climate change
- Know the details of the greenhouse effect
- Know how wind impacts climate
- Know how the oceans impact climate

From Chapter 7.2

- Know the different climate zones
- Know the Tropic of Cancer and the Tropic of Capricorn
- Know how to read a climatograph
- Know the different types of biomes in Canada (and the one that isn't in Canada)

From Chapter 7.3

- Know details about global warming
- Know melting ice caps
- Know rising sea levels and acidity
- Know health related issues to climate change

From Chapter 8.1

- Know how energy is recycled in a system, specifically positive and negative feedback loops
- Know the three ways thermal energy is transferred
- Know how temperature and density (saltiness) influences the currents
- Know the basic premise of El Nino and La Nina

From Chapter 8.2

- Know how concentration is calculated
- Know how Water, Carbon Dioxide, Methane, Ozone, and Chlorofluorocarbons influence the greenhouse effect

From Chapter 8.3

- Know how energy is transferred between biotic (living) and abiotic (non living) parts of an ecosystem
- Know both the carbon cycle and the nitrogen cycle
- Know the 3 processes of Nitrogen Fixation

From Chapter 9.1

- Know how we study trees, ice cores, sedimentary rock and fossils to discover past climates

From Chapter 9.2

- Know how radar works to help determine rainfall
- Know how satellites are used in monitoring earth
- Know the four main satellites in the Earth Observing System (EOS)
- Know how climate models and general circulation models are used to predict future climates
- Know the limitations and restrictions of climate models

From Chapter 9.3

- Know how we can interpret climate change data
- Know how we can reduce our carbon footprint
- Know how Canada is attempting to reduce the carbon footprint on the earth (IPCC and Kyoto Protocol)

Recommended Questions

Pg. 392-394 # 1-15, 18-20, 24, 27, 29-34

Optics Review

Key Terms:

Incandescence	Fluorescence	Luminescence	Phosphorescence
Chemiluminescence	Bioluminescence	wavelength	reflection
medium	ray	incident ray	reflected ray
angle of incidence	angle of reflections	normal	plane mirror
concave	convex	principal axis	focal point
focal length			

Apart from the key terms above, you should know the following from chapter 10

From Chapter 10.1

- know all the different types of light
- understand the process of how an excited atom produces light (electron jumping up a shell)
- know light is an electromagnetic wave and how we can only see certain wavelengths

From Chapter 10.2

- know that light travels in a straight line called a ray
- know how to use rays and the law of reflection to draw an image using ray diagrams
- know the four characteristics of images (location, orientation, size and type)
- know the difference between virtual image and a real image

From Chapter 10.3 and 10.4

- know how to draw ray diagrams to determine where the image is in curved mirrors
- know how to use the mirror equation
- know how to use the magnification equation

Equations:

Mirror Equation:

$$\frac{1}{f} = \frac{1}{d_o} + \frac{1}{d_i}$$

Magnification Equation:

$$m = \frac{h_i}{h_o} = \frac{-d_i}{d_o}$$

Key Terms:

refraction	refracted ray	angle of refraction	index of refraction
partial reflection and refraction		critical angle	total internal reflection
rainbow	apparent depth	shimmering	mirage

Temperature Inversion

Apart from the key terms above, you should know the following from chapter 11

From Chapter 11.1

- know what refraction is
- know how the speed of light in a medium causes it to bend (including which way it bends)
- know Fermat's Principle
- know how to use the index of refraction

From Chapter 11.2

- know what is different about light going from a slow medium to a fast medium
- know how to calculate the critical angle
- know how to describe total internal reflection and when it occurs
- know the uses discussed in this section about internal reflection

From Chapter 11.3

- know how a rainbow is produced (be able to draw the diagram)
- know how apparent depth influences what we see
- know how changes in the temperature of water results in shimmering, mirages and temperature inversions

Equations:

index of refraction:

$$n = \frac{c}{v} \quad c = 3.0 \times 10^8 \text{ m/s}$$

Key Terms:

lens	converging lens	diverging lens	spherical aberration
chromatic aberration	objective lens	eyepiece	cornea
retina	myopia	hyperopia	presbyopia
astigmatism	night-vision		

Apart from the key terms above, you should know the following from chapter 11

From Chapter 12.1

- know what a lens is
- know the difference between converging and diverging lenses
- know spherical and chromatic aberration

From Chapter 12.2

- know how to draw ray diagrams of converging lenses and diverging lenses
- know how to use the thin lens and magnification equations

From Chapter 12.3

- know how telescopes and microscopes work
- know how the human eye works
- know the different names for poor vision

Equations:

Thin Lens Equation:

$$\frac{1}{f} = \frac{1}{d_o} + \frac{1}{d_i}$$

Magnification Equation:

$$m = \frac{h_i}{h_o} = \frac{-d_i}{d_o}$$

Recommended Equations

pg 518 # 1-8, 10-14, 17

pg 519 # 18-19, 24-26